

AIR, PESTICIDES, AND TOXICS 6TH FLOOR RECORDS CENTER INFILING / NEW FILE FORM

433574
TX

New File ☐

OR

Infiling



Choose from the file types below:

AIR FACILITY:☐ AR - Acid Rain☐ CB - Confidential Business☐ CO - Compliance☐ EN - **Enforcement☐ GE - General☒ PE - Permit☐ RA - Regulatory Applicability☐ Other _____**TSCA:**☐ AH - Asbestos Hazard Emergency Response Act☐ AS or AW - Asbestos or Asbestos Worker Protection☐ CB - Confidential☐ FI - Site Specific☐ FO - Non Site Specific☐ IM - **Section 5 & 8☐ LB - **Lead☐ PC - **PCB** Extension of file type (if needed): ☐ ES - Enforcement Sensitive☐ DO - Docket Number**EPCRA/SARA** ☐**FIFRA** ☐*EPA Registry I.D.*

Current FRS Number:

(Found in EnviroFacts)

110000895568

Facility Name & Physical Address:

Vopak Terminal Galena Park Inc.
Expansion & Biodiesel Proj1500 Clinton Dr.Galena Park, TX, 77547 3338

Remarks:

Requestor's Name & Phone Number:

Les KovalX6733

Program Management Files:

A current listing of these file types and their numeric codes are located in a blue binder on the top shelf of the "APT" file cabinet in the 9th Floor Records Center.

AIRS - Aerometric Information Retrieval System

ATO - Air Toxics

EMR - Emergency Response

ENF - Enforcement -

ENF 5-5-1 requires Month and Fiscal Year accompany file code.

ENF 5-6-5 requires Fiscal Year accompany file code.

EXR - External Relations

GEO - Geographical Summary Data

GRA - Grants Administration

The majority of this section requires the Fiscal Year accompany file code.

Project Officer Grants require the Grant number and Fiscal Year accompany file code.

LAB - Laboratory Support

LBP - Lead Based Paint

LBP 12-3 requires the facility name in which document refers to be either highlighted or circled on the top page.

LEL - Legal and Legislative

MON - Monitoring NES - National Emission Standards

NSP - New Source Performance

NSR - New Source Review

OPP - Operating Permits Program

PEA - Permits Administration Program

PES - Pesticides

PLA - Planning

PUA - Public Affairs

RAD - Radiation

RCR - Resource Conservation and Recovery Act - Regulatory Development

RDE - Research and Development

REG - Registration

SIP - State Implementation Plan

SUP - Superfund

TITL - Title III

TSC - Toxic Substance Control

TSC 1-1-4 requires the facility name in which document refers to be either highlighted or circled on the top page.

TSU - Technical Support

VRP - Voluntary Reduction Program

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



EPA

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Protecting Texas by Reducing and Preventing Pollution

November 29, 2011

MR TONY BUNDICK
REGIONAL MANAGER SH&E AND QUALITY GULF COAST TERMINALS
VOPAK TERMINAL GALENA PARK INC
PO BOX 897
DEER PARK TX 77536-0897

RECEIVED
11 DEC 12 PM 12:52
AIR PERMITS SECTION
6PD-R

Re: Permit Amendment Application
Permit Number: 2480A
Expansion Project And Biodiesel Project
Galena Park, Harris County
Regulated Entity Number: RN102753670
Customer Reference Number: CN600285969

Dear Mr. Bundick:

The executive director has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

Mr. Tony Bundick
Page 2
November 29, 2011

Re: Permit Number 2480A

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Guillermo Reyes, P.E. at (512) 239-5716.

Sincerely,

Bridget C. Bohac

Bridget C. Bohac
Chief Clerk
Office of the Chief Clerk
Texas Commission on Environmental Quality

BB/GR/

Enclosures

cc: Director, Environmental Public Health Division, Harris County Public Health and
Environmental Services, Pasadena
Air Section Manager, Region 12 - Houston
Air Permits Section Chief, New Source Review, Section (6PD-R), U.S. Environmental
Protection Agency, Region 6, Dallas

Project Number: 161984

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



EXAMPLE A

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

PERMIT NUMBER: 2480A

APPLICATION AND PRELIMINARY DECISION. Vopak Terminal Galena Park, Inc., PO Box 897, Deer Park, Texas 77536-0897, has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to Air Quality Permit Number 2480A, which would authorize construction of a Expansion Project And Biodiesel Project at 1500 Clinton Dr, Galena Park, Harris County, Texas 77547. This application was submitted to the TCEQ on December 13, 2010. The amendment will authorize an increase in emissions of the following air contaminants: VOC, NOX, CO, PM.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The executive director has made a preliminary decision to issue the permit because it meets all rules and regulations. The permit application, executive director's preliminary decision, and draft permit will be available for viewing and copying at the TCEQ central office, the TCEQ Houston regional office, and at the Galena Park Branch Library, 1500 Keene Street, Galena Park, Harris County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Houston Regional Office, 5425 Polk St Ste H, Houston, Texas.

PUBLIC COMMENT/PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit comment or to ask questions about the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing. **You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

RESPONSE TO COMMENTS AND EXECUTIVE DIRECTOR ACTION. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. Because no timely hearing requests have been received, after preparing the response to comments, the executive director may then issue final approval of the application. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the Commissioners' Integrated Database (CID).**

INFORMATION AVAILABLE ONLINE. When they become available, the executive director's response to comments and the final decision on this application will be accessible through the Commission's Web site at www.tceq.texas.gov/goto/cid. Once you have access to the CID using the above link, enter the permit number for this application which is provided at the top of this notice. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=29.73333&lng=-95.235636&zoom=13&type=r>.

MAILING LIST. You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at www.tceq.texas.gov/about/comments.html, or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. If you communicate with the TCEQ electronically, please be aware that your email address, like your physical mailing address, will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Vopak Terminal Galena Park Inc at the address stated above or by calling Mr. Justin Iwuala, Environmental Specialist at (281) 604-6013.

Notice Issuance Date: November 29, 2011

Example B

Publication Elsewhere in the Newspaper:

TO ALL INTERESTED PERSONS AND PARTIES:

Vopak Terminal Galena Park, Inc., has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment to Air Quality Permit Number 2480A, which would authorize construction of a Expansion Project And Biodiesel Project at 1500 Clinton Dr, Galena Park, Harris County, Texas 77547. Additional information concerning this application is contained in the public notice section of this newspaper.

3"
minimum

← Minimum 2 column widths or 4 inches →



1. The first part of the report is a summary of the work done during the year.

2. The second part is a detailed account of the work done during the year.

3. The third part is a summary of the work done during the year.

4. The fourth part is a summary of the work done during the year.

5. The fifth part is a summary of the work done during the year.

6. The sixth part is a summary of the work done during the year.

7. The seventh part is a summary of the work done during the year.

8. The eighth part is a summary of the work done during the year.

9. The ninth part is a summary of the work done during the year.

10. The tenth part is a summary of the work done during the year.

11. The eleventh part is a summary of the work done during the year.

12. The twelfth part is a summary of the work done during the year.

Public Notice Checklist
Notice of Application and Preliminary Decision for an Air Quality Permit
(2nd Notice)

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

Within 33 calendar days after date of this letter

Publish *Notice of Application and Preliminary Decision for an Air Quality Permit* in the same newspaper(s) in which you published *Notice of Receipt of Intent to Obtain Permit* for this application.

- Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing.
- Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper

Provide copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) at a public place for review and copying. Keep them there for duration of the designated comment period.

First day of newspaper publication

Review published newspaper notice for accuracy. If errors, contact Air Permits Division.

Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place.

Within 10 business days after date of publication

Mail original newspaper clippings showing publication date and newspaper name to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Mail photocopies of newspaper clippings showing publication date and newspaper name to persons listed on *Notification List*.

Within 30 calendar days after date of publication

Mail original affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Mail photocopies of affidavits to persons listed on *Notification List*.

Within 10 business days after end of the designated comment period

Mail Public Notice Verification Form to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Mail photocopies of Public Notice Verification Form to persons listed on *Notification List*.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



Instructions for Public Notice For New Source Review Air Permit

Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter).
- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.
- You must publish this notice in one issue of any applicable newspaper.
- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.

- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths**. If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.
- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).
- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.
- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.
- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must still be posted adjacent to each English language sign.
- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.
- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the ***Public Notice Verification Form (Form TCEQ-20244)*** indicating your compliance with the requirements regarding publication in an alternative

language. This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.

- It is suggested the applicant work with the local school district to do the following:
 - (a) determine if a bilingual program is required in the district;
 - (b) determine which language is required by the bilingual program;
 - (c) locate the nearest elementary and middle schools; and
 - (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.
- **If you determine that you must meet the alternative language notice requirements, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language.** Since the most common bilingual programs are in Spanish, the TCEQ has provided example Spanish notice templates for your use. All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Electronic versions of the Spanish templates are available through the Air Permits Division Web site at www.tceq.texas.gov/goto/air/publicnotice.
- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice.**
- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.
- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.
- For each newspaper in which you published, you must submit **original newspaper clippings or tear sheets** of each published notice which shows the complete notice that was published, the date of publication, and the name of the newspaper to the TCEQ Office of the Chief Clerk within **10 business days** after the date of publication.
- You must submit an **original affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the

Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavit forms.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the original newspaper clippings described above.

- You must submit the *Public Notice Verification Form (Form TCEQ-20244)* to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met bilingual notice requirements. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**
- The **original affidavits of publication, *Public Notice Verification Form*, and original newspaper clippings of the published notices** must be mailed to:

Texas Commission on Environmental Quality
Office of the Chief Clerk, MC-105
Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

- Please ensure that the affidavit and newspaper clippings you send to the Chief Clerk are originals and that all blanks on the affidavit are filled in correctly. Photocopies of newspaper clippings and affidavits will not be accepted.
- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication on time**, the TCEQ may suspend further processing on your application or take other actions.

Sign Posting

Signs must remain in place and be legible and be visible from the street for the entire duration of the comment period, from the beginning of the *Notice of Receipt and Intent* until the close of the comment period after publication of the *Notice of Application and Preliminary Decision*.

Application in a Public Place

- You must provide a copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.
- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls.)

- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.
- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."
- You must submit verification of file availability using the *Public Notice Verification Form (Form TCEQ-20244)* within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html.**

General Information

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.

AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF _____ §

Before me, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn,
(name of newspaper representative)

deposes and says that (s)he is the _____
(title of newspaper representative)

of the _____; that said newspaper is generally circulated
(name of newspaper)

in _____, Texas;
(in the municipality or nearest municipality to the location of the facility or the proposed facility)

that the attached notice was published in said newspaper on the following date(s):

(newspaper representative's signature)

Subscribed and sworn to before me this the _____ day of _____, 20____,

to certify which witness my hand and seal of office.

(Seal)

Notary Public in and for the State of Texas

Print or Type Name of Notary Public

My Commission Expires

TCEQ-Office of the Chief Clerk
MC-105 Attn: Notice Team
P.O. Box 13087
Austin, Texas 78711-3087

Applicant Name: Vopak Terminal Galena Park, Inc.
Permit No.: 2480A

ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING
STATE OF TEXAS §

COUNTY OF _____ §

Before me, the undersigned authority, on this day personally appeared

_____, who being by me duly sworn, deposes
(name of newspaper or publication representative)

and says that (s)he is the _____
(title of newspaper or publication representative)

of the _____; that said newspaper or publication is generally circulated
(name of newspaper or publication)

in _____, Texas;
(in the municipality or the same county as the location of the facility or the proposed facility)

that the attached notice was published in said newspaper or publication on the following date(s):

(newspaper or publication representative's signature)

Subscribed and sworn to before me this the _____ day of _____, 20____,
to certify which witness my hand and seal of office.

Notary Public in and for the State of Texas

(Seal)

Print or Type Name of Notary Public

My Commission Expires

Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting*, the *Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Originals should be sent to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. **Copies** should be sent to the following:

U.S. Environmental Protection Agency
Region 6
Attn: Air Permits Section (6PD-R)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Texas Commission on Environmental Quality
Office of Air
Air Permits Division, MC-163
Mr. Guillermo Reyes, P.E.
P.O. Box 13087
Austin, Texas 78711-3087

Texas Commission on Environmental Quality
Houston Regional Office
5425 Polk St Ste H
Houston, Texas 77023-1452

Director
Environmental Public Health Division
Harris County Public Health and
Environmental Services
101 S Richey St Ste G
Pasadena, Texas 77506-



SPECIAL CONDITIONS

Permit Number 2480A

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating requirements specified in the special conditions. (11/03)
2. Non-fugitive emissions from relief valves, safety valves, or rupture discs of gases containing volatile organic compounds (VOC) at a concentration of greater than 1 percent are not authorized by this permit unless authorized on the maximum allowable emission rates table (MAERT). Any releases directly to atmosphere from relief valves, safety valves, or rupture discs of gases containing VOC at a concentration greater than 1 weight percent are not consistent with good practice for minimizing emissions. (10/06)

Leak Detection And Repair Program

3. Piping, Valves, Connectors, Pumps, and Compressors in Contact with Volatile Organic Compounds (VOC)- 28RCT
 - A. The requirements of paragraphs F and G shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure equal to or less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made available upon request.

The exempted components may be identified by one or more of the following methods:

 - (1) piping and instrumentation diagram (PID);
 - (2) a written or electronic database or electronic file;
 - (3) color coding;
 - (4) a form of weatherproof identification; or
 - (5) designation of exempted process unit boundaries.
 - B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute

SPECIAL CONDITIONS

Permit Number 2480A

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(ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.

- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical. New and reworked buried connectors shall be welded.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by Title 30 TAC Chapter 115 (30 TAC Chapter 115), shall be identified in a list to be made available upon request. The non-accessible valves may be identified by one or more of the methods described in subparagraph A above.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 15 days of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;

- (1) a cap, blind flange, plug, or second valve must be installed on the line or valve; or
- (2) the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72

SPECIAL CONDITIONS

Permit Number 2480A

Page 3

hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown. A check of the reading of the pressure-sensing device to verify disc integrity shall be performed at least quarterly and recorded in the unit log or equivalent. Pressure-sensing devices that are continuously monitored with alarms are exempt from recordkeeping requirements specified in this paragraph.

An approved gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs are being monitored, the response factor shall be calculated for the average composition of the process fluid. A calculated average is not required when all of the compounds in the mixture have a response factor less than 10 using methane. If a response factor less than 10 cannot be achieved using methane, then the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not

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limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.

- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 10,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. A first attempt to repair the leak must be made within 5 days. Records of the first attempt to repair shall be maintained.
- I. A leaking component shall be repaired as soon as practicable, but no later than 15 days after the leak is found. If the repair of a component would require a unit shutdown, that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list. The cumulative daily emissions from all components on the delay of repair list shall be estimated by multiplying by 24 the mass emission rate for each component calculated in accordance with the instructions in 30 FAC 115.782 (c)(1)(B)(i)(II). The calculations of the cumulative daily emissions from all components on the delay of repair list shall be updated within ten days of when the latest leaking component is added to the delay of repair list. When the cumulative daily emission rate of all components on the delay of repair list times the number of days until the next scheduled unit shutdown is equal to or exceeds the total emissions from a unit shutdown, the TCEQ Regional Manager and any location programs shall be notified and may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown. This notification shall be made within 15 days of making this determination.
- J. Records of repairs shall include date of repairs, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of instrument monitoring shall indicate dates and times, test methods, and instrument readings. The instrument monitoring record shall include the time that monitoring

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took place for no less than 95% of the instrument readings recorded. Records of physical inspections shall be noted in the operator's log or equivalent.

- K. Fugitive emission monitoring required by 30 TAC Chapter 115 may be used in lieu of Items F through I of this condition.
- L. Compliance with the requirements of this condition does not assure compliance with requirements of an applicable New Source Performance Standard (NSPS) or an applicable National Emission Standard for Hazardous Air Pollutants (NESHAPS) and does not constitute approval of alternative standards for these regulations.

Federal Applicability

- 4. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on NSPS promulgated for Storage Tanks in 40 CFR Part 60, Subparts A, K and Kb. (11/03)
- 5. These facilities shall comply with all applicable requirements of EPA regulations on NESHAPS promulgated for Equipment Leaks (Fugitive Emission Sources) of Benzene Waste in 40 CFR Part 61, Subparts A and J when storing a compound with greater than 10 percent benzene. (11/03)
- 6. These facilities shall comply with all applicable requirements of 30 TAC § 113.230, including the referenced requirements contained in 40 CFR Part 63, Subparts A and R. (11/03)
- 7. Total emissions of Hazardous Air Pollutants (HAP) (as listed in or pursuant to Section 112(b) of the Federal Clean Air Act) from the permitted facility shall not exceed 9.94 tons per year of any individual HAP, and shall not exceed 24.94 tons per year as the aggregate of all emitted HAP. Compliance with the emission limits of this condition shall be documented in the facility's annual emissions inventory questionnaire (EIQ) confirmation report provided by the TCEQ (or in an equivalent report generated by the permit holder), and shall be demonstrable on a rolling twelve-month basis. (01/07)

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VOPAK Health Effects Analysis Tool (VHEAT)

8. When storing or loading chemical compounds not previously authorized, the permittee shall operate this facility in a manner consistent with the results of the VHEAT 2010, Version 2 and the TCEQs Toxicology and Risk Assessment (TARA) Section Guidance. The permittee shall either amend or alter the permit prior to the use of any modified or updated version of VHEAT other than the VHEAT 2010, Version 2. The permittee shall operate the tanks and loading operations in a manner consistent with the results of the VHEAT and the TCEQs TARA Section Guidance for all chemicals. (12/11)
9. Prior to receiving a chemical for storage or loading, the permit holder shall determine if the chemical meets the following criteria:
 - A. If the chemical is on the Approved Chemicals List, Attachment 1, the chemical can be stored and loaded according to VHEAT analysis.
 - B. If the chemical is not on the Approved Chemicals List, Attachment 1, but is on the latest TARA Effects Screening Levels (ESL) List dated October 2003 or later, the chemical can be stored and loaded according to VHEAT analysis performed using the ESL on the TARA list.
 - C. If the chemical is not on the Approved Chemicals List, Attachment 1, and is not on the TARA ESL list dated July 2000 or later, the permit holder shall provide the TARA section with a material safety data sheet and Chemical Abstract Service (CAS) number or sufficient vendor data to determine the ESL for the chemical and shall request an ESL determination from the TARA Section. Then, the chemical can be stored and loaded according to VHEAT analysis performed using the ESL.
 - D. The permit holder shall maintain records of chemicals approved for storage and loading by the steps outlined in paragraphs B and C above. These chemicals shall be added to the Approved Chemicals List, Attachment 1, when the permit is next revised or amended. (11/03)
10. The permittee shall use the VHEAT health effects analysis tool to determine the acceptable control options based on the following TARA requirements on maximum modeled concentration of impact ($\mu\text{g}/\text{m}^3$) and the ESL for the subject chemical to be stored or loaded. The requirements apply for compounds not specifically noted later in this condition.

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Short-Term Impacts

- Industrial Property: The maximum predicted short-term concentration at an industrial receptor shall not exceed ten times the short-term ESL, and shall not exceed two times the short-term ESL more than 24 hours during one year, and shall not exceed four times the short-term ESL more than ten hours during one year.
- Residential Property: The maximum predicted concentration at a residential receptor shall not exceed two times the short-term ESL, and shall not exceed one time the short-term ESL more than 24 hours during one year.
- Commercial Property: Same as residential property.
- Water Bodies: The maximum predicted concentration at a water body receptor shall not exceed 25 times the short-term ESL, and shall not exceed ten times the short-term ESL more than 24 hours during one year.

Annual Impacts

11. At any receptor, maximum predicted annual concentration as determined by the formula; $GLC_{max} (annual) = GLC_{max} (short-term) \times 0.08 \times (\text{hours of operation per year} / 8,760)$, shall not exceed one time the annual ESL, excluding benzene, ethylene dichloride, and hydrogen chloride (HCl). (11/03)

For storage terminal operations (storage, loading, and unloading) involving benzene and ethylene dichloride, short-term ESLs of 30 $\mu\text{g}/\text{m}^3$ and 40 $\mu\text{g}/\text{m}^3$ respectively, shall be used as inputs in the VHEAT short-term analysis, using the guidelines outlined in Special Condition No. 9. (11/03)
12. For storage terminal operations (storage, loading, and unloading) involving styrene and the chemicals on the TARAs Air Pollutant Watch List:

<http://www.tceq.state.tx.us/implementation/tox/AirPollutantMain/APWL.html>

The permittee shall have the following two options: 1) the permittee shall combust those chemicals in the flares if, prior to the combustion, the VHEAT determines that predicted

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- maximum short-term concentrations resulting from the flare shall not exceed the published short-term ESLs, or 2) the permittee shall notify TARA and obtain prior approval. For cases involving emissions of benzene, the permittee shall follow the requirements provided in Special Condition No. 10. (11/03)
13. The permittee shall either amend or alter the permit prior to the use of any modified or updated version of VHEAT other than the VHEAT 2010, Version 2. (12/11)
 14. To demonstrate compliance with the TARA health effects guidance, when a change in service occurs or a new chemical is added to the list of chemicals to be stored or loaded at the facility, the permit holder shall keep records indicating VHEAT analysis results. The VHEAT analysis results shall include: a) chemical name, averaging period, and ESL; b) uncontrolled and controlled emission rates calculated and final control option utilized if any; c) the GLCmax and exceedance counts for multipliers outlined in Special Condition Number 9; and d) the GLCni and exceedance counts for multipliers outlined in Special Condition No. 9. (11/03)
 15. At the time of the permit amendment or renewal, at the request of the TCEQ, the permit holder shall review the VHEAT program and its subcomponents to ensure the program is conservative and protective of the environment. The permit holder shall:
 - A. Contact the Air Dispersion Modeling Team (ADMT) of the Air Permits Division of the TCEQ to discuss if ISC/ISCPrime models are still acceptable. If a new, more conservative model is being used by the ADMT at the time of the contact, the permit holder shall also submit a revised VHEAT program and a permit amendment application for review that shall include the new program.
 - B. Review downwash calculations for changes in obstructions that have been built since the VHEAT program was approved and submit a permit amendment application and revised VHEAT program if the downwash calculations have changed.
 - C. Review EPA calculation methodologies for changes in emission estimation procedures for storage tanks and loading operations and submit a permit amendment application and revised VHEAT program if the emission estimation procedures have changed.
 - D. Review ESLs in the Approved Chemicals List, Attachment 1, and compare with the current ESL list maintained by TARA and submit a revised Approved Chemicals List, Attachment 1 as an alteration to the permit if necessary. (11/03)

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Storage and Loading Of VOC

16. The control requirements specified in paragraphs B-E of this condition shall not apply (1) where the VOC has an aggregate partial pressure of less than 0.5 psia at the maximum expected operating temperature or (2) to storage tanks smaller than 25,000 gallons. (12/11)
- A. An internal floating deck or "roof" or equivalent control shall be installed in all tanks. The floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof (IFR): (1) a liquid-mounted seal, (2) two continuous seals mounted one above the other, or (3) a mechanical shoe seal. Installation of equivalent control requires prior review and approval by the TCEQ Executive Director.
 - B. An open-top tank containing a floating roof (external floating roof tank) which uses double seal or secondary seal technology shall be an approved control alternative to an IFR tank provided the primary seal consists of either a mechanical shoe seal or a liquid-mounted seal, and the secondary seal is rim-mounted. A weathershield is not approvable as a secondary seal unless specifically reviewed and determined to be vapor-tight.
 - C. For any tank equipped with a floating roof, the holder of this permit shall follow 40 CFR § 60.113b, Testing and Procedures, to verify seal integrity. Additionally, the permit holder shall follow 40 CFR § 60.115b, Reporting and Recordkeeping Requirements, to provide records of the dates seals were inspected, seal integrity, and corrective actions taken.
 - D. The floating roof design shall incorporate sufficient flotation to conform to the requirements of API Code 650, or an equivalent degree of flotation, except that an internal floating cover need not be designed to meet rainfall support requirements and the materials of construction may be steel or other materials.
 - E. Uninsulated VOC storage tank exterior surfaces exposed to the sun shall be white or aluminum.
 - F. For purposes of assuring compliance with VOC emission limitations, the holder of this permit shall maintain a monthly emissions record which describes calculated emissions of VOC from all storage tanks and loading operations. The record shall include tank or loading point identification number, control method

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used, tank or vessel capacity in gallons, name of the material stored or loaded, VOC molecular weight, VOC monthly average temperature in degrees Fahrenheit, VOC vapor pressure at the monthly average material temperature in psia, and VOC throughput for the previous month and year-to-date. Records of VOC monthly average temperature are not required to be kept for unheated tanks which receive liquids that are at or below ambient temperatures. These records shall be maintained at the plant site for at least two years and be made available to representatives of the TCEQ upon request.

G. If throughput records are specified in the special conditions of this permit, the holder of this permit may keep such records in lieu of the records required in paragraph G.

H. Emissions for tanks and loading operations shall be calculated using: (a) AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" Fifth Edition, and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks."

All lines and connectors shall be visually inspected for any defects prior to hookup. Lines and connectors that are visibly damaged shall be removed from service. Operations shall cease immediately upon detection of any liquid leaking from the lines or connections.

Sustained dripping from fittings during loading/unloading operations is not permitted. Any liquid spill that occurs during loading/unloading activities shall be reported pursuant to 30 TAC §§ 101.6 or 101.7 and shall be cleaned up immediately to minimize air emissions.

J. Each tank truck shall pass vapor-tight testing every 12 months using the methods described in Title 40 Code of Federal Regulations Part 60 (40 CFR 60), Subpart XX. As an alternative, each tank truck shall be leak checked and certified annually in accordance with 49 CFR 180.407 Department of Transportation (DOT), for pressure tank trucks rated at 15 psig or greater.) The permit holder shall not allow a tank truck to be filled unless it has passed a leak-tight test within the past year as evidenced by a certificate which shows the date the tank truck last passed the leak-tight test required by this condition and the identification number of the tank truck.

17. Compounds with a vapor pressure of greater than 0.5 psia at the maximum expected operating temperature may be stored in a fixed-roof tank provided the tank vents are

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routed to a control device consisting of a flare, a CAS or another TCEQ-approved device meeting the criteria outlined in Special Condition No. 15B. This permit does not allow the halogenated VOC compounds to be controlled by a flare. (11/06)

18. Internal floating roof tanks at the terminal may be converted to fixed-roof tanks and fixed-roof tanks at the terminal may be converted to IFR tanks provided the tanks continue to meet best available control technology (BACT) requirements of the most recent edition of the TCEQ publication "Technical Guidance Package for Chemical Sources: Storage Tanks, Publication No. RG-166" (2003 BACT for IFR tank: Primary Seal - Mechanical Shoe or Liquid Mounted, or, Primary Seal - Vapor-Mounted and Secondary Seal - Rim Mounted). The permit holder shall maintain a record of these tank conversions. (11/03)

Loading Operations

19. Loading operations are limited to those chemicals that are first evaluated by the VHEAT and the results indicate that impacts caused from the emissions of those chemicals are in accordance with the health effects requirements of the TCEQ's TARA Section specified in Special Condition No. 9. (11/03)
20. Loading emissions from railcars and tank trucks containing VOC compounds greater than 0.5 psia shall be controlled by either a flare, a CAS, or an equivalent TCEQ authorized control device. If the flare, the CAS or the equivalent TCEQ authorized control device are not operational, then, all operations that need to be controlled shall be suspended until the control devices are repaired and fully operational. This permit does not allow the halogenated VOC compounds to be controlled by a flare. (11/06)
21. Loading operations involving VOC having a vapor pressure ≤ 0.5 psia can be performed without a control device if VHEAT results indicate acceptable impacts at the off-site receptors. If the VHEAT results indicate unacceptable impacts without control, then VHEAT shall be used to determine the type of appropriate control option; either the Flares (Emission Point Nos. [EPNs] TO-1, TO-2, and TO-3), the CAS or an equivalent TCEQ authorized control device. If the flare, the CAS or the equivalent TCEQ authorized control device cannot operate as emission control devices, then all loading operations that need to be controlled shall be suspended until the control devices are repaired and fully operational. (11/06)

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22. If off-site odors originating from Vopak Galena Park storage or loading operations are confirmed by TCEQ personnel, one or more of the following actions must be taken to eliminate the nuisance conditions: a) use of additional or more effective controls for the compound causing the off-site nuisance odors, and/or b) the scale-down or termination of storage and loading operations causing the off-site odor until such time as corrective measures are identified and fully implemented. Records of corrective action taken shall be maintained. (11/03)

Boilers

23. Fuel gas used for the Boilers (EPNs B-1 and B-2) shall be sweet natural gas containing no more than five grains of total sulfur per 100 dry standard cubic feet (dscf).
24. Each Boiler (EPNs B-1 and B-2) shall have a maximum gas firing rate of 12.5 MMBtu per hour. (11/03)

Waste Gas Abatement

Flares

25. Fuel gas used for the Flares (EPNs TO-1, TO-2, and TO-3) shall be sweet natural gas containing no more than 5 grains of total sulfur per 100 dscf. (11/03)
26. The flares shall operate with no less than 98 percent destruction efficiency in disposing of carbon compounds captured by the vapor collection system and shall be designed and operated in accordance with 40 CFR § 60.18 including specifications of minimum heating value of the waste gas, maximum tip velocity, and pilot flame monitoring. If necessary to ensure adequate combustion, sufficient fuel gas shall be added to make the gases combustible. (11/03)
27. If supplemental fuel gas is required to maintain the minimum required heat content of 300 Btu per standard cubic feet (Btu/scf), a pressure gauge shall be installed to continuously measure the supplemental fuel gas line pressure to the flare during these storage and loading operations that require use of the flare. In the event the pressure gauge is not functioning properly, or if there is a loss in supplemental fuel line pressure such that the minimum required heat content of 300 Btu/scf is not maintained, the operations that

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- require use of the flare shall cease until the pressure gauge is repaired and the required supplemental fuel line pressure is restored. (11/03)
28. The flares shall be equipped with continuously burning pilots and either an automatic reigniting system or a controller that discontinues the waste gas flow if a pilot flame is not present. The presence of the pilot flame shall be monitored using a thermocouple or equivalent device. An infrared monitor is considered equivalent to a thermocouple for pilot flame monitoring purposes. Any interruption in pilot gas flow will require immediate corrective action. Those components of the automatic reigniting system which require periodic replacement shall be replaced as needed. (11/03)
29. The flares shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Such operation shall be ensured by the use of air assist to the flare. (11/03)

Utilization Of Permits By Rule

30. Permits by rule shall not be used at the permitted facility to authorize either additional storage capacity or loading throughput. Provided all other requirements of 30 TAC Chapter 106 and of Special Condition Nos. 4,5,7, 8-12, 14, 16, 17, 19-22, 33-36, 38, 39, 44 C.- F. and 45 D.-I. are satisfied, this restriction does not apply to the following circumstances: (3/09)
- A. Construction of new storage tanks or loading facilities, or additional throughput at existing storage tanks or loading facilities, in service only for compounds with vapor pressures less than 0.5 psia.
- B. Construction of new storage tanks, or additional throughput at existing storage tanks, from which all emissions during the tank roof "off-float" period (i.e., roof landed to roof refloated, includes standing idle and re-fill emissions) are routed to a vapor recovery and abatement system that provides a control efficiency of at least 98 wt.-%. An alternative to the "route to control" option is demonstrable compliance with Special Condition No. 38 of this permit.
- C. Construction of new loading facilities, or additional throughput at existing loading facilities, routed to a vapor recovery and abatement system that provides a control efficiency of at least 98 wt.-%.

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- D. Activities unrelated to, and that do not otherwise affect emissions from, storage tank and loading operations.

Tank Roof Landing Operations

General

31. This permit authorizes emissions from the planned tank roof landing activities listed below. The emissions from occurrences of the listed activities are subject to the maximum allowable emission rates indicated on this permit's MAERT: (3/09)
- A. Maintenance events;
 - B. Inventory control; and
 - C. Routine product changes.
32. The total emissions attributable to tank operations (e.g., routine withdrawal and storage emissions, standing idle emissions after landing, re-filling emissions after landings, degassing emissions) shall comply with applicable emission rate limits specified in Special Condition No. 1 of this permit and with the permit's annual and short-term MAERT.
33. The occurrence of each roof landing and its associated emissions shall be recorded and the rolling 12-month emission total shall be updated on a monthly basis. These records shall include at least the following information:
- A. the identification of the tank and emission point number, and any control devices used to reduce emissions;
 - B. the reason for the tank roof landing;
 - C. the date and time of each of the following events:
 - (1) the landing of the tank roof,
 - (2) the withdrawal of standing liquid (i.e., all but heel),
 - (3) the removal of heel (if conducted),
 - (4) the completion of tank de-gassing (if conducted),
 - (5) the commencement of tank re-fill,
 - (6) the re-float of the tank roof.

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- D. The estimated quantity of each air contaminant or mixture of air contaminants emitted, with the methods and supporting data (e.g., re-fill rate, leg height, etc.) used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in American Petroleum Institute's (API) Technical Report 2567 titled "Evaporative Loss from Storage Tank Floating Roof Landings" dated April 2005 or Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids."
34. The permit holder shall, within 48 hours after landing a tank roof, either (1) re-float the landed roof, or (2) begin the process to empty, de-gas, and (when practical) rinse the tank.

These requirements do not apply to storage tanks being refilled with liquids of true vapor pressures less than 0.5 psia at 95°F, to new tanks at initial fill, to tanks de-gassed according to requirements of Special Condition No. 39, or when tank emissions are routed to a control device.

The process of emptying and re-filling a tank shall be continuous and as rapid as possible within the limits specified by Special Condition No. 38.

Design and Construction of New Tanks

35. The following requirements apply to new floating roof tanks:
- A. Tanks shall be constructed with a sloped bottom and a sump that can be emptied to less than 1% of its nominal volume.
 - B. Tanks shall be constructed or equipped with the capability for connection to a vapor recovery system that routes vapors from the vapor space under the landed roof to a control device.
 - C. The tank's outlet to the vapor recovery system shall be located at a height no less than 90% of the tank roof's leg height, or be of such a design that demonstrably allows the control of no less than 90% of the vapors generated under the IFR during tank re-filling.

Abatement Requirements for New and Existing Modified Tanks

36. With the exceptions listed in Paragraph F. of this special condition, the requirements of Paragraphs A. - E. apply to the roof landing operations conducted for (1) new floating roof tanks, or (2) existing floating roof tanks modified such that any physical or operational change results in increased emissions, a change in their character, or a change in the method of their control (subject tanks* listed):

* Applicable to all tanks authorized on this permit's MAERT of March 6, 2009, except in the circumstances described in Special Condition No. 37 for tanks eligible for its exemption from control.

- A. The tank's vapor space shall be connected to a vapor recovery system that routes vapors from the vapor space under the landed roof to a control device. For existing unmodified tanks, the available tank appurtenances may be used to connect to the control device.
- B. The vapor recovery system's collection rate shall always be greater than the tank's re-fill rate.
- C. The control device shall provide a control efficiency of no less than 98 wt.-%.
- D. The vapor recovery and control device shall be applied to the subject tanks during the entire period that begins at the first stoppage of product withdrawal resulting in the roof landing, and ends either (1) when the filled liquid height reaches 90% of the tank roof leg height, or (2) when the tank has been de-gassed according to the requirements of Special Condition No. 39.
- E. The flowrate to the vapor recovery system, the tank's re-fill rate, the required re-fill time and the liquid temperature shall be monitored and recorded to demonstrate compliance with the requirements of paragraph B. of this condition, and of Special Condition No. 39 C. (vapor withdrawal rate requirements).

Compliance with these requirements may be alternatively demonstrated by application and maintenance of a vapor space vacuum of no less than two inches of water while the vapor recovery system is operational.

For circumstances where an applied vacuum is used to demonstrate compliance with the requirements of Special Condition Nos. 36 B. and 39 C., the vacuum

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shall be monitored at a point in the vapor collection line downstream from the tank's vapor space and as close as practical to it. Pressure readings in the collection line shall be recorded every 5 minutes during the first 15 minutes of the vapor recovery period specified in Paragraph D. of this condition, and every 15 minutes thereafter through the duration of this period.

Where passive abatement systems are used (e.g., carbon adsorption), other appropriate methods may be used to demonstrate compliance with these requirements.

- F. Paragraphs A. - E. of this condition do not apply to vessels being refilled with liquids of true vapor pressures less than 0.5 psia at 95°F, to new tanks at initial fill, or to tanks de-gassed according to requirements of Special Condition No.39.

Exceptions to Abatement Requirements for Existing Tanks

37. Roof landing operations for existing unmodified floating roof tanks* (i.e., those unaffected by the physical or operational changes previously described) are authorized to be conducted without the controls specified in Paragraphs A. - E. of Special Condition No. 36 of this permit only in the following circumstances:

- A. "Convenience" landings required by a customer's termination of the use of the tank.
- B. Product changes (i.e., product different from the previously stored product) as defined by a different CAS number and/or product specifications (e.g., Reid vapor pressure, etc.).
- C. The planned maintenance events to remove a vessel from service for purposes of:
 - (1) conducting repairs required by regulation or by results of inspections and
 - (2) fugitive monitoring, or
 - (3) removing inoperative internal equipment or accessories. (e.g., blending
 - (4) impellers, jet nozzles, etc.).

* Applicable only to existing tanks unmodified as of March 6, 2009 and authorized on this permit's MAERT of same date. Does not apply to the new or modified tanks subject to Special Condition No. 36 of this permit and the controls it specifies.

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Operational Limits for Acceptable Off-Property Effects

38. Off-property ground level concentrations of emissions from re-filling tanks with products of true vapor pressure greater than 0.5 psia shall not exceed the concentrations indicated by the site-specific dispersion modeling analysis submitted November 13, 2008:

Compliance with this requirement shall be demonstrated by either of the following options:

A. Maximum Combined Re-filling Rate (bbl/hr):

Provided the combined maximum re-filling emission rate allowed by Special Condition No. 38B is not exceeded, the maximum combined re-filling rate (bbl/hr) for products with a true vapor pressure greater than 0.5 psia shall be determined by the following formula based on site-specific dispersion modeling:

$$FRp = n \times ESLp,$$

where:

FRp = maximum re-fill rate, product re-filled (bbl/hr)
n = re-fill rate factor
= 0.41* (non-benzene re-fill only)
ESLp = hourly effects screening level, product re-filled (ug/m3)

*: use of this factor is based on "drain dry" heel, S = 0.15. For re-fills of vessels with full or partial heels, the maximum fill rate shall be adjusted as indicated:

Full Heel: $FRp \text{ (full)} = FRp * (0.15/0.6)$

Partial Heel: $FRp \text{ (partial)} = FRp * (0.15/0.5)$

A. Maximum Combined Re-filling Emission Rate (lb/hr):

The maximum combined re-filling emission rate (lb/hr) shall be determined by the following formula derived from the site-specific dispersion modeling:

$$ERP = n \times ESLp,$$

where:

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ERp = maximum emission rate, product re-filled (lb/hr)
n = emission rate factor
= 0.023 (non-benzene re-fill only)
ESLp = hourly effects screening level, product re-filled (ug/m3)

De-gassing Operations

39. The following requirements apply to de-gassing the vapor space under landed roofs if the vapor pressure of the previously stored liquid is greater than 0.50 psia at 95°F:

- A. Emissions attributable to tank de-gassing, cleaning or rinsing operations shall be routed to a control device that satisfies the applicable VOC control requirements of 30 TAC Chapter 115, Subchapter F, Division 3 relating to Degassing or Cleaning of Stationary, Marine, and Transport Vessels.
- B. Any liquid removed from the tank bottom shall be stored in a closed vessel until transferred to permanent storage.
- C. The vapor space shall be depressurized prior to de-gassing and routed to a control device with a control efficiency of no less than 98 wt.-%. The locations and identifiers of the vents and controlled exhaust stream shall be recorded. A negative pressure (i.e., vacuum) of no less than 2 inches of water shall be maintained on the vapor space by the vapor recovery system.
- D. The vapor space shall be vented using good engineering practice to ensure its evacuation to the control device to the extent allowed by the design of the tank.
- E. A volume of vapor equivalent to twice that of the vapor space shall be passed through the control device before the vent stream may be sampled to determine whether VOC concentrations are acceptable for uncontrolled venting. The vapor volume measurement shall include no make-up air to the control device. The VOC sampling and analysis shall be performed using an instrument with a flame ionization detector (FID) (e.g., TVA 1000 FID), or an approved alternative detector. The instrument/FID must meet all requirements specified in Section 8.1 of EPA Method 21 (40 CFR 60, Appendix A). Sampling shall be performed as indicated in Subparagraphs F.- I. of this permit condition.

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- F. The instrument/FID shall be calibrated with zero and span calibration gas mixtures prior to sampling and in accordance with the instrument manufacturer's specifications. Zero gas shall be certified to contain between 0 and 10 ppmv total hydrocarbons. The span calibration gas shall be methane at a concentration between 10,000 and 25,000 ppmv [range upper bound may be 34,000 ppmv if a TVA 1000 FID is used for the concentration measurement] and certified by the manufacturer to be accurate to within 2 percent. Calibration error for the zero and span calibration gas checks must be less than 10 percent of the span calibration gas value before sampling may be conducted. The results of these checks shall be recorded.
- G. The sampling point shall be upstream of the inlet to the control device. The sample ports and the collection system must be designed and operated such that air does not leak into the sample probe or the collection system downstream of the process equipment or vessel being purged.
- H. Recording of sampling results shall not begin until the sampling instrument has been activated for a period not less than twice its response time.
- I. The vessel is degassed and may be vented without control only after its vent stream VOC concentration has been monitored for at least a five-minute period in which the maximum one-minute average concentration is less than 10,000 ppmv. If a TVA 1000 FID is used, the maximum concentration may be demonstrated at 34,000 ppmv.

The following data shall be recorded:

- (1) sampling date
 - (2) activation and response times for the sampling instrument
 - (3) the time the initial sample was taken
 - (4) all 1-minute average VOC concentrations derived from sampling
 - (5) vapor space and purge gas volumes
- J. De-gassing shall be performed at least once every 24 hours unless one of the following conditions is satisfied:
- (1) there is no standing liquid in the tank.

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- (2) the maximum one-minute average concentration does not exceed the limits defined in Paragraph I. of this Special Condition, and the time period since the most recent concentration measurement does not exceed 24 hours.

Carbon Adsorption System

40. The permittee shall use a carbon adsorption system (CAS) in the emission control of a compound loaded or stored at the facility only if the vendor of CAS provides information to indicate that CAS will achieve 95 percent removal efficiency for that chemical compound. Except for halogenated VOC compounds, if vendor provided information references a removal efficiency that is less than 95 percent for compounds to be loaded or stored, the permittee shall use a flare for emission control. Records of CAS vendor's data for compounds shall be kept at the facility and shall be made available to the TCEQ personnel upon request. (11/06)
41. The CAS shall consist of at least three activated carbon canisters that are connected in series.
 - A. The CAS shall be tested and recorded once a week when utilized to determine breakthrough of VOC. The sampling point shall be at the outlet of the second canister but before the inlet to the third or final canister. Sampling shall be done during operating conditions, reflecting maximum emission venting to the CAS. (Example: during loading, tank filling, and process venting)
 - B. The method of VOC sampling and analysis shall be by flame ionization detector (FID) or a TCEQ-approved equivalent. On each day that sampling is required, the FID shall be calibrated prior to sampling with a certified gas mixture at 0 ppmv ± 10 percent and at 100 ppmv ± 10 percent.
 - C. Breakthrough shall be defined as a measured VOC concentration of 100 ppmv as VOC. When VOC breakthrough is detected, the venting operation shall be halted. The loading and storing operations that need CAS control shall remain shutdown until fresh carbon beds are installed to show three fresh carbon canisters in series. The loading and storing operations may resume afterwards.
 - D. Records of the CAS monitoring maintained at the plant site shall include (but are not limited to) the following:
 - (1) Sample time and date.

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- (2) Monitoring results (ppmv).
- (3) Corrective action taken including the time and date of that action.
- (4) Process operations occurring at the time of sampling.

These records shall be made available to representatives of the TCEQ and local programs upon request and shall be retained for at least two years following the date that the data is obtained. (11/03)

Initial Determination Of Compliance

42. Sampling ports and platform(s) shall be incorporated into the design of the Marine Enclosed Flare Stack (EPN TO-2), the North Enclosed Flare (EPN TO-3), the CAS or any other equivalent TCEQ authorized control device according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director or the Director of the TCEQ Compliance Support Division in Austin. (11/03)
43. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Enclosed Flare (EPN TO-1), Marine Enclosed Flare (EPN TO-2), the North Enclosed Flare (EPN TO-3), the CAS or any other equivalent TCEQ authorized control device. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. (Enclosed Flare EPN TO-1 was tested on March 20-21, 1997, and the test results were submitted in April 1997, to the TCEQ.

A. The appropriate TCEQ Regional Office in the region where the source is located shall be contacted as soon as testing is scheduled, but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

- (1) Date for pretest meeting,
- (2) Date sampling will occur,
- (3) Name of firm conducting sampling,
- (4) Type of sampling equipment to be used, and
- (5) Method or procedure to be used in sampling.

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The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviation from sampling procedures specified in permit conditions or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director or the Director of the TCEQ Compliance Support Division in Austin shall approve or disapprove of any deviation from specified sampling procedures.

Requests to waive testing for any pollutant specified in Section B and C of this condition shall be submitted to the TCEQ Austin Office of Permitting, Remediation, and Registration, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for NSPS testing, which must have EPA approval, shall be submitted to the TCEQ Compliance Support Division in Austin.

- B. Air contaminants emitted from the marine enclosed flare, and the north enclosed flare to be tested for include (but are not limited to) VOC, carbon monoxide, nitrogen oxide. The test results shall be used to demonstrate compliance with the hourly limits on the MAERT for the flares and the required 98 percent destruction efficiency for VOC.
- C. Air contaminants emitted from the exhaust vent of CAS or any other equivalent TCEQ authorized control device to be tested for include (but are not limited to) VOC. The results shall be shown to demonstrate compliance with the hourly limits on the MAERT for the EPNs at which the control device is used, and the required removal efficiency of 95 percent.
- D. Sampling shall occur within 60 days after the receipt of a material suitable for conducting a performance test but no longer than 180 days after the initial start of the facilities and at such other times as may be required by the Executive Director of the TCEQ. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office. Additional time to comply with the applicable requirements of 40 CFR Part 60 and 40 CFR Part 61 requires EPA approval, and requests shall be submitted to the TCEQ Compliance Support Division in Austin.
- E. The plant shall operate at maximum loading rates during stack emission testing. Primary operating parameters that enable determination of loading rate and

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control device operating parameters shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.

- F. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Houston Regional Office.

One copy to the TCEQ Austin Compliance Support Division. (11/06)

Recordkeeping

44. The following records shall be kept for at least a two-year rolling period and made available to representatives of the TCEQ or local pollution control authorities upon request:

- A. Semiannual analyses of the natural gas used to fire the boilers and as supplemental fuel for the Flares (EPNs TO-1, TO-2, and TO-3) at this facility. These analyses shall include the higher heating value of the gas in Btu/scf and the hydrogen sulfide and total sulfur content, expressed as grains per 100 dscf. These analyses shall be used to determine compliance with Special Condition Nos. 23 and 24 of the permit.
- B. The monthly volumetric flow rate (MMscf/month) of natural gas fired in the Boilers (EPNs B-1, and B-2). Records shall be kept individually for each combustion source and shall be used to determine compliance with Special Condition No. 23 and calculation of the VOC emission cap.
- C. Tank storage records. The records shall include tank or loading point identification number, tank configuration (fixed-roof or IFR), control method used, tank or vessel capacity in gallons, name of the material stored or loaded, amount of the material stored or loaded in gallons, ESL of the material stored or loaded, VOC molecular weight, VOC vapor pressure at the material temperature in psia, and benzene content in weight percent of liquid. The tank records shall be sufficient in detail to determine compliance with Special Condition Nos. 15 through 17 and to calculate compliance with the VOC emission cap.

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- D. Loading and drumming operations- For all loading operations at the Loading Racks (EPNs L-1 through L-15 and L-18) and drumming operations at the Drumming Racks (EPNs L-16 through L-17), records kept shall include (but are not limited to) date, type of operation (loading/drumming), product loaded, ESL of product loaded, loading/drumming rate (gallons/hour), total time of loading operation, total amount of product loaded or drummed (gallons or MMgallons), temperature of product loaded/drummed in °F using actual liquid bulk temperature, vapor pressure of product at loading or drumming temperature in psia, and calculated air emissions from the loading or drumming for EPNs L-1 through L-18.

The records shall be sufficient in detail to determine compliance with Special Condition Nos. 18 through 20 and to calculate compliance with the VOC emission cap.

- E. Marine loading operations - Records shall be kept of product loading to marine vessels at Ship Dock 1 (EPN SD-1). The records that shall be kept are as follows:
- (1) For all controlled loading, records kept shall include (but are not limited to) date, name of product loaded, ESL of product loaded, vessel type (ship or barge), loading rate (gallons/hour), total time of loading operation, total amount of product loaded (gallons), temperature of product loaded in °F using actual liquid bulk temperature, vapor pressure of product at loading temperature in psia and calculated air emissions from the loading. The controlled marine loading records shall be sufficient in detail to determine compliance with Special Condition Nos. 19 and 20 and to calculate compliance with the VOC emission cap.
 - (2) For all uncontrolled loading, records kept shall include (but are not limited to) date, name of product loaded, ESL of product loaded, benzene content, vessel type (ship or barge), loading rate (gallons per hour), total time of loading operation, total amount of product loaded (gallons), temperature of product loaded in °F using actual liquid bulk temperature, vapor pressure of product at loading temperature in psia, type of loading (uncontrolled), and calculated air emissions from the loading. The uncontrolled marine loading records shall be sufficient in detail to determine compliance with Special Condition Nos. 19 and 20 and to calculate compliance with the VOC emission caps for SD-1. (11/03)

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(3) Before loading a marine vessel with a VOC which has a vapor pressure equal to or greater than 0.5 pounds per square inch absolute under actual storage conditions, the owner or operator of the marine terminal shall verify that the marine vessel has passed an annual vapor tightness test as specified in 40 CFR § 63.565(c) [September 19, 1995] or 40 CFR § 61.304(f) [October 17, 2000]. (11/06)

F. Records of actual annual HAP emissions - The TCEQ's annual EIQ confirmation report, or its equivalent HAP emissions report generated by the permit holder, shall be used as the basis for compliance with Special Condition No. 7, demonstrable on a rolling twelve-month basis. (01/07)

Emission Cap Calculation And Recordkeeping

45. The holder of this permit shall provide an ongoing demonstration of compliance with the VOC emission cap limit listed on the permit MAERT by calculating and recording aggregate air contaminant emission rates as outlined below.

A. These records shall be maintained at the plant site on at least a two-year retention basis and shall be made available upon request to TCEQ personnel or to any local air pollution control agency having jurisdiction.

B. By the end of the following month, the permittee shall calculate and record VOC air contaminant emission rates for the calendar month in units of tons per month and for the trailing 12-month period in units of tons per year.

C. All storage tank emissions shall be calculated and recorded using the methodology in: (a) AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 7 - Storage of Organic Liquids," dated January 1995 (or the EPA Tanks 4.09b computer program) and (b) the TCEQ publication titled "Technical Guidance Package for Chemical Sources - Storage Tanks" dated February 1995 or a later edition. Vopak shall have up to 12 months from the date of revision to update the methodologies.

D. Total combined Fugitive Emissions (EPNs FU-100TKS and FU-200TKS) shall be calculated and recorded using the following emission factors: 2.02 pounds (lbs) per hour and 48.48 lbs per day.

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Using the fugitive emission factors and credits appropriate for the 28 RCT Leak Detection and Repair Program, permittee shall revise the above emission factors as necessary to incorporate the future addition and removal of fugitive emission components. Records of any such adjustments shall be maintained with each monthly compliance demonstration using the above factors as the base.

- E. Loading fugitive emissions at Ship Dock 1 (EPN SD-1) during controlled loading of ships without vacuum assist shall be calculated and recorded. These emissions shall be calculated as 5 percent of the emissions calculated using the loading loss equation in AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5 - Transportation and Marketing of Petroleum Liquids," dated January 1995 and using a saturation factor, S , of 0.2, the actual vapor pressure P , in psia, and the actual liquid temperature, T , in degrees Rankine.
- F. Loading fugitive emissions at Ship Dock 1 (EPN SD-1) during controlled loading of barges without vacuum assist shall be calculated and recorded. These emissions shall be calculated as 5 percent of the emissions calculated using the loading loss equation in AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5 - Transportation and Marketing of Petroleum Liquids," dated January 1995 and using a saturation factor, S , of 0.5, the actual vapor pressure P , in psia, and the actual liquid temperature, T , in degrees Rankine.
- G. Loading emissions at the Loading Racks (EPNs L-1 through L-15 and L-18) shall be calculated and recorded using the loading loss equation in AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5 - Transportation and Marketing of Petroleum Liquids," dated January 1995 and using a saturation factor, S , of 0.6, the actual vapor pressure P , in psia and the actual liquid temperature, T , in degrees Rankine.
- H. Loading emissions at the Drumming Racks (EPNs L-16 through L-17) shall be calculated and recorded using the loading loss equation in AP-42 "Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5 - Transportation and Marketing of Petroleum Liquids," dated January 1995 and using a saturation factor, S , of 0.6, the actual vapor pressure P , in psia and the actual liquid temperature, T , in degrees Rankine.
- I. Emissions from the Enclosed Flare (EPN TO-1), Marine Enclosed Flare (EPN TO-2), and the North Enclosed Flare (EPN TO-3) shall be calculated and recorded. A VOC destruction efficiency of 98 percent is assumed for the flares. Hence, the VOC emitted from the flare shall be 2 percent of the VOC sent to the

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flare. The VOC sent to the flares shall be 100 percent of controlled loading emissions with vacuum assist and 95 percent of controlled loading emissions without vacuum assist (the remaining 5 percent is emitted as a fugitive at the dock) as well as other emission streams routed to the flares. Controlled loading emissions shall be calculated using the loading loss equation in AP-42

"Compilation of Air Pollution Emission Factors, Fifth Edition, Chapter 5 - Transportation and Marketing of Petroleum Liquids," dated January 1995, the appropriate saturation factor, S, 0.2 for ships and 0.5 for barges, the actual vapor pressure P, in psia, and the actual liquid temperature, T, in degrees Rankine.

- J. The VOC emissions from Boilers (EPNs B-1 and B-2) shall be calculated by multiplying the million scf/month of natural gas fired by each boiler by the factor of 5.5 lbs of VOC/million scf. Records shall be kept individually for each boiler.
- K. The VOC emissions from the CAS or the equivalent TCEQ approved control device shall be kept with the primary emission point that this control device is supplementing. For example, if the control device is attached to Loading Rack L-1, the emissions will be recorded with EPN L-1 emissions for the month. If CAS is used as the control device, emissions from CAS shall be calculated as 5 percent of the total VOC sent to the CAS. If another TCEQ approved control device is used, the removal efficiency determined during testing of that control device per Special Condition No. 43, shall be used to determine the emissions. (11/06)

Permit By Rule Authorizations

- 46. Pursuant to §106.261 (a)(7)(A)-(B) and currently effective PBR registrations, the facility has been authorized to store and load the following products into ships and barges:
 - A. Hexyl Alcohol, Alfol 20 + alcohol, Alfor 1216 Alcohol, Durasyn 166, C1618 Isomerized Olefin/AlphaOlefin C1618 (Registration No. 76067)
 - B. Those listed separately in Attachment II (List of Products Currently Authorized by Permit by Rule) (Registration Nos. 81529 and 84543). (3/09)

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MSS Conditions For 2011 Expansion Project

47. This permit authorizes emissions from all units and sitewide activities for the planned maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment C) attached to this permit.

These emissions are subject to the maximum allowable emission rates indicated on the MAERT.

Attachment A identifies the inherently low emitting MSS activities that may be performed at the plant. Emissions from activities identified in Attachment A shall be considered to be equal to the potential to emit represented in the permit application. The estimated emissions from the activities listed in Attachment A must be revalidated annually. This revalidation shall consist of the estimated emissions for each type of activity and the basis for that emission estimate.

Routine maintenance activities, as identified in Attachment B may be tracked through the work orders or equivalent. Emissions from activities identified in Attachment B shall be calculated using the number of work orders or equivalent that month and the emissions associated with that activity identified in the permit application.

The performance of each planned MSS activity not identified in Attachments A or B and the emissions associated with it shall be recorded and include at least the following information:

- A. the physical location at which emissions from the MSS activity occurred, including the emission point number, common name, and any other identifier for the point at which the emissions were released into the atmosphere;
- B. the type of planned maintenance, startup, or shutdown activity and the reason for the planned activity;
- C. the common name and the facility identification number of the facilities at which the MSS activity and emissions occurred;
- D. the date and time of the MSS activity and its duration;
- E. the estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be

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estimated using the methods identified in the associated amendment application consistent with good engineering practice.

The performance of each maintenance activity and the emissions associated with it shall be recorded and the rolling 12-month emissions shall be updated on a monthly basis.

48. This condition applies only to piping and components subject to leak detection and repair monitoring requirements identified in other NSR permits. Each open-ended valve or line shall be equipped with an appropriately sized cap, blind flange, plug, or a second valve to seal the line. Except during sampling, both valves shall be closed. If the isolation of equipment for hot work or the removal of a component for repair or replacement results in an open ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 72 hours. If the repair or replacement is not completed within 72 hours, the permit holder must complete either of the following actions within that time period;
- A. a cap, blind flange, plug, or second valve must be installed on the line or valve; or
 - B. the open-ended valve or line shall be monitored once for leaks above background for a plant or unit turnaround lasting up to 45 days with an approved gas analyzer and the results recorded. For all other situations, the open-ended valve or line shall be monitored once by the end of the 72 hours period following the creation of the open ended line and monthly thereafter with an approved gas analyzer and the results recorded. For turnarounds and all other situations, leaks are indicated by readings of 500 ppmv and must be repaired within 24 hours or a cap, blind flange, plug, or second valve must be installed on the line or valve.
49. This permit authorizes emissions from EPN UNC-MSS (floating roof maintenance) for the storage tanks identified in the attached facility list during planned floating roof landings. Tank roofs may only be landed for changes of tank service or tank inspection/maintenance as identified in the permit application. Emissions from change of service tank landings, for which the tank is not cleaned and degassed, shall not exceed 10 tons of VOC in any rolling 12 month period. Tank roof landings include all operations when the tank floating roof is on its supporting legs. These emissions are subject to the maximum allowable emission rates indicated on the MAERT. The following requirements apply to tank roof landings.
- A. The tank liquid level shall be continuously lowered after the tank floating roof initially lands on its supporting legs until the tank has been drained to the maximum extent practicable without entering the tank. Liquid level may be

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maintained steady for a period of up to two hours if necessary to allow for valve lineups and pump changes necessary to drain the tank. This requirement does not apply where the vapor under a floating roof is routed to control or a controlled recovery system during this process.

- B. If the VOC partial pressure of the liquid previously stored in the tank is greater than 0.50 psi at 95°F, tank refilling or degassing of the vapor space under the landed floating roof must begin within 24 hours after the tank has been drained unless the vapor under the floating roof is routed to control or a controlled recovery system during this period. The tank shall not be opened except as necessary to set up for degassing and cleaning. Floating roof tanks with liquid capacities less than 100,000 gallons may be degassed without control if the VOC partial pressure of the standing liquid in the tank has been reduced to less than 0.02 psia prior to ventilating the tank. Controlled degassing of the vapor space under landed roofs shall be completed as follows:

- (1) Any gas or vapor removed from the vapor space under the floating roof must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv or 10 percent of the LEL. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space under the floating roof when degassing to the control device or controlled recovery system.
- (2) The vapor space under the floating roof shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
- (3) A volume of purge gas equivalent to twice the volume of the vapor space under the floating roof must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 51.

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- (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
 - (5) If ventilation is to be maintained with emission control, the VOC concentration shall be recorded once an hour.
 - (6) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.
- C. The tank shall not be opened or ventilated without control, except as allowed below or until one of the criteria in part D of this condition is satisfied.
- (1) Minimize air circulation in the tank vapor space.
 - (a) One manway may be opened to allow access to the tank to remove or de-volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.
 - (b) Access points shall be closed when not in use.
- D. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.
- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.

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(2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:

- (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
- (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
- (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition 51.

(3) No standing liquid verified through visual inspection.

The permit holder shall maintain records to document the method used to release the tank.

E. Tanks shall be refilled as rapidly as practicable until the roof is off its legs with the following exceptions:

- (1) Only one tank with a landed floating roof can be filled at any time.
- (2) The vapor space below the tank roof is directed to a control device when the tank is refilled until the roof is floating on the liquid. The control device used and the method and locations used to connect the control device shall be recorded. All vents from the tank being filled must exit through the control device.

F. The occurrence of each roof landing and the associated emissions shall be recorded and the rolling 12-month tank roof landing emissions shall be updated on a monthly basis. These records shall include at least the following information:

- (1) the identification of the tank and emission point number, and any control devices or recovery systems used to reduce emissions;

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- (2) the reason for the tank roof landing;
- (3) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - (a) the roof was initially landed,
 - (b) all liquid was pumped from the tank to the extent practical,
 - (c) start and completion of controlled degassing, and total volumetric flow,
 - (d) all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
 - (e) if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow,
 - (f) refilling commenced, liquid filling the tank, and the volume necessary to float the roof; and
 - (g) tank roof off supporting legs, floating on liquid;
- (4) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events c and g with the data and methods used to determine it. The emissions associated with roof landing activities shall be calculated using the methods described in Section 7.1.3.2 of AP-42 "Compilation of Air Pollution Emission Factors, Chapter 7 - Storage of Organic Liquids" dated November 2006 and the permit application.

50. The following requirements apply to fixed roof storage tanks.

A. The tank shall not be opened or ventilated without control, unless air circulation in the tank vapor space is minimize as specified below, until one of the criteria in part B of this condition is satisfied.

- (1) One manway may be opened to allow access to the tank to remove or de-

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volatilize the remaining liquid. Other manways or access points may be opened as necessary to remove or de-volatilize the remaining liquid. Wind barriers shall be installed at all open manways and access points to minimize air flow through the tank.

- (2) Access points shall be closed when not in use.

B. The tank may be opened without restriction and ventilated without control, after all standing liquid has been removed from the tank or the liquid remaining in the tank has a VOC partial pressure less than 0.02 psia. These criteria shall be demonstrated in any one of the following ways.

- (1) Low VOC partial pressure liquid that is soluble with the liquid previously stored may be added to the tank to lower the VOC partial pressure of the liquid mixture remaining in the tank to less than 0.02 psia. This liquid shall be added during tank degassing if practicable. The estimated volume of liquid remaining in the drained tank and the volume and type of liquid added shall be recorded. The liquid VOC partial pressure may be estimated based on this information and engineering calculations.
- (2) If water is added or sprayed into the tank to remove standing VOC, one of the following must be demonstrated:
 - (a) Take a representative sample of the liquid remaining in the tank and verify no visible sheen using the static sheen test from 40 CFR 435 Subpart A Appendix 1.
 - (b) Take a representative sample of the liquid remaining in the tank and verify hexane soluble VOC concentration is less than 1000 ppmw using EPA method 1664 (may also use 8260B or 5030 with 8015 from SW-846).
 - (c) Stop ventilation and close the tank for at least 24 hours. When the tank manway is opened after this period, verify VOC concentration is less than 1000 ppmv through the procedure in Special Condition No. 51.
- (3) No standing liquid verified through visual inspection.

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- (4) The permit holder shall maintain records to document the method used to release the tank.

C. If the ventilation of the vapor space is controlled, the emission control system shall meet the requirements of i through v. Controlled degassing of the vapor space shall be completed as follows:

- (1) Any gas or vapor removed from the vapor space must be routed to a control device or a controlled recovery system and controlled degassing must be maintained until the VOC concentration is less than 10,000 ppmv. The locations and identifiers of vents other than permanent roof fittings and seals, control device or controlled recovery system, and controlled exhaust stream shall be recorded. There shall be no other gas/vapor flow out of the vapor space when degassing to the control device or controlled recovery system.
- (2) The vapor space shall be vented using good engineering practice to ensure air contaminants are flushed out of the tank through the control device or controlled recovery system to the extent allowed by the storage tank design.
- (3) A volume of purge gas equivalent to twice the volume of the vapor space must have passed through the control device or into a controlled recovery system, before the vent stream may be sampled to verify acceptable VOC concentration. The measurement of purge gas volume shall not include any make-up air introduced into the control device or recovery system. The VOC sampling and analysis shall be performed as specified in Special Condition 51.
- (4) The sampling point shall be upstream of the inlet to the control device or controlled recovery system. The sample ports and the collection system must be designed and operated such that there is no air leakage into the sample probe or the collection system downstream of the process equipment or vessel being purged.
- (5) Degassing must be performed every 24 hours unless there is no standing liquid in the tank or the VOC partial pressure of the remaining liquid in the tank is less than 0.15 psia.

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D. Records shall be maintained as follows.

- (1) for the purpose of estimating emissions, the date, time, and other information specified for each of the following events:
 - (a) start and completion of controlled degassing, and total volumetric flow,
 - (b) all standing liquid was removed from the tank or any transfers of low VOC partial pressure liquid to or from the tank including volumes and vapor pressures to reduce tank liquid VOC partial pressure to <0.02 psi,
 - (c) if there is liquid in the tank, VOC partial pressure of liquid, start and completion of uncontrolled degassing, and total volumetric flow;
- (2) the estimated quantity of each air contaminant, or mixture of air contaminants, emitted between events with the data and methods used to determine it.

51. Air contaminant concentration shall be measured using an instrument/detector meeting one set of requirements specified below.

A. VOC concentration shall be measured using an instrument meeting all the requirements specified in EPA Method 21 (40 CFR 60, Appendix A) with the following exceptions:

- (1) The instrument shall be calibrated within 24 hours of use with a calibration gas. The calibration gas used and its concentration, and the vapor to be sampled and its approximate response factor (RF), shall be recorded. If the RF of the VOC (or mixture of VOCs) to be monitored is greater than 2.0, the VOC concentration shall be determined as follows

VOC Concentration = Concentration as read from the instrument * RF

In no case should a calibration gas be used such that the RF of the VOC (or mixture of VOCs) to be monitored is greater than 5.0.

SPECIAL CONDITIONS

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- (2) Sampling shall be performed as directed by this permit in lieu of section 8.3 of Method 21. During sampling, data recording shall not begin until after two times the instrument response time. The date and time shall be recorded, and VOC concentration shall be monitored for at least 5 minutes, recording VOC concentration each minute. The highest measured VOC concentration shall not exceed the specified VOC concentration limit prior to uncontrolled venting.
52. Control devices required by this permit for emissions from planned MSS activities are limited to those types identified in this condition. Control devices shall be operated with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours. Each device used must meet all the requirements identified for that type of control device.
- Controlled recovery systems identified in this permit shall be directed to an operating process or to a collection system that is vented through a control device meeting the requirements of this permit condition.

Thermal Oxidizer.

- A. The thermal oxidizer firebox exit temperature shall be maintained at not less than 1400°F and waste gas flows shall be limited to assure at least a 0.5 second residence time in the fire box while waste gas is being fed into the oxidizer.
- B. The thermal oxidizer exhaust temperature shall be continuously monitored and recorded when waste gas is directed to the oxidizer. The temperature measurements shall be made at intervals of six minutes or less and recorded at that frequency.
- The temperature measurement device shall be installed, calibrated, and maintained according to accepted practice and the manufacturer's specifications. The device shall have an accuracy of the greater of ± 0.75 percent of the temperature being measured expressed in degrees Celsius or $\pm 2.5^{\circ}\text{C}$.
53. MSS activities represented in the permit application may be authorized under permit by rule only if the procedures, emission controls, monitoring, and recordkeeping are the same as those required by this permit.

Dated: XXXXXX

Permit 2480A
Attachment A

INHERENTLY LOW EMITTING ACTIVITIES

Activity	Emissions				
	VOC	NOx	CO	PM	H2S/SO ₂
Aerosol Cans	x				
Calibration of analytical equipment	x	x	x		x
Carbon can replacement	x				
Instrumentation/analyzer maintenance	x				
Replacement of analyzer filters and screens	x				
Soap and other aqueous based cleaners	x				
Cleaning sight glasses	x				

Dated: XXXXXXXX

Permit 2480A
Attachment B

ROUTINE MAINTENANCE ACTIVITIES

Pump repair/replacement

Fugitive component (valve, pipe, flange) repair/replacement

Compressor repair/replacement

Dated: XXXXXX

DRAFT

Permit 2480A
Attachment C
MSS ACTIVITY SUMMARY

Facilities	Description	Emissions Activity	EPN
Storage Tanks	Floating Roof Landings Floating Roof Refloating Floating Roof Refilling Tank Degassing	Vapor pressure 0.50 psia vent to control	PTO
Storage Tanks	Tank Degassing	vent to atmosphere	UNC-MSS
Attachment A	Miscellaneous low emitting activities	See Attachment A	UNC-MSS
Attachment B	Routine Maintenance Activities	See Attachment B	UNC-MSS

Dated: XXXXXX

ATTACHMENT I
List of Approved Chemicals
Permit Number 2480A

Substance	CAS Number	Short-Term ESL µg/m3
1,2 Diethyl Benzene	25340-17-4	2500
1,3 Diethyl Benzene	25340-17-4	2500
1,4 Diethyl Benzene	25340-17-4	2500
2,2,4 Trimethyl 1,3 Pentanediol	25265-77-4	835
Acetal	105-57-7	4900
Acetamide	60-35-5	320
Acetic Acid	64-19-7	250
Acetic Anhydride	108-24-7	200
Acetone	67-64-1	5900
Acetone Cyanohydrin	75-86-5	40
Acetonitrile	75-05-8	340
Acetophenone	98-86-2	490
Acetyl Chloride	75-36-5	4
Acrylic Acid	79-10-7	60
Adipic Acid	124-04-9	50
Adiponitrile	111-69-3	90
Ammonium Chloride	12125-02-9	100
Ammonium Hydroxide	1336-21-6	170
Ammonium Nitrate	6484-52-2	10
Ammonium Sulfate	7783-20-2	50
Aniline	62-53-3	80
Anisole	100-66-3	100
Benzal Chloride	98-87-3	20
Benzene	71-43-2	75
Benzoic Acid	65-85-0	50
Benzonitrile	100-47-0	500
Benzophenone	119-61-9	150
Benzotrichloride	98-07-7	8
Benzoyl Chloride	98-88-4	60

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

Page 2

Substance	CAS Number	Short-Term ESL µg/m3
Benzyl Acetate	140-11-4	610
Benzyl Alcohol	100-51-6	500
Benzyl Benzoate	120-51-4	590
Benzyl Chloride	100-44-7	50
Bromobenzene	108-86-1	30
Bromochloromethane	74-97-5	10600
Bromoethane	74-96-4	220
Butane	106-97-8	19000
Butyl Carbitol	112-34-5	1060
Butyl Cellosolve	111-76-2	240
Butyl Cellosolve Acetate	112-07-2	310
Butyl Formate	592-84-7	21000
Butyl Isocyanate	111-36-4	10
Butyl Methacrylate	97-88-1	7000
Butyric Anhydride	106-31-0	250
Butyronitrile	109-74-0	220
Calcium Bromide	7789-41-5	100
Calcium Chloride	10043-52-4	70
Caprolactone	502-44-3	2200
Carbon Tetrachloride	56-23-5	130
Chloroacetaldehyde	107-20-0	30
Chloroacetic Acid	79-11-8	12
Chlorobenzene	108-90-7	460
Chlorodifluoromethane	74-45-6	18000
Chlorosulfonic Acid	7790-94-5	14
Coal Tar	8007-45-2	1
Creosote	8001-58-9	1
Cyanogen	460-19-5	210
Cycloheptane	291-64-5	3400

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

Page 3

Substance	CAS Number	Short-Term ESL µg/m3
Cyclohexyl Isocyanate	3173-53-3	20
Cyclooctane	292-64-8	3500
Cyclopentadiene	542-92-7	2000
Cyclopentane	287-92-3	3400
Cyclopentanone	120-92-3	1700
Cyclopentene	142-29-0	8100
Decane	124-18-5	10000
Dibenzopyrrole	86-74-8	100
Dibutyl Maleate	105-76-0	2600
Dibutyl Phthalate	84-74-2	50
Dichlorofluoromethane	75-43-4	420
Dichloromethane	75-09-2	260
Diethanolamine	111-42-2	20
Diethyl Ketone	96-22-0	7000
Diethyl Phthalate	84-66-2	50
Diethyl Sulfate	64-67-5	25
Diethylamine	109-89-7	150
Diethylene Glycol Dimethyl Ether	111-96-6	270
Diethylene Glycol Ethyl Ether	111-90-0	1500
Diethylene Triamine	111-40-0	40
Diesel	77650-28-3	1000
Diglycolamine	929-06-6	380
Diisobutylamine	110-96-3	125
Diisobutylene	-----	1800
Diisopropanolamine	110-97-4	460
Diisopropylamine	108-18-9	210
Diisopropylene Glycol	-----	100
Dimethyl Acetamide	127-19-5	360
Dimethyl Ether	115-10-6	19000

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Dimethyl Sulfate	77-78-1	5
Dimethyl Sulfoxide	67-68-5	140
Diphenylamine	122-39-4	100
Dipropyl Ether	111-43-3	2500
Dipropyl Ketone	123-19-3	2300
Dipropylamine	142-84-7	200
Dipropylene Glycol	110-98-5	1200
Dipropylene Glycol Dibenzoate	94-51-9	220
Ditridecyl Phthalate	119-06-2	100
Dodecyl Mercaptan	112-55-0	40
Dodecylamine	124-22-1	100
Dripolene	-----	3500
Ethane	74-84-0	12000
Ethanolamine	141-43-5	75
Ethyl Acetate	141-78-6	14400
Ethyl Alcohol	64-17-5	18800
Ethyl Benzoate	93-89-0	250
Ethyl Butyl Ketone	106-35-4	2300
Ethyl Chloride	75-00-3	500
Ethyl Formate	109-94-4	3000
Ethyl Hexane	-----	3500
Ethyl Propionate	105-37-3	130
Ethyl Trichloroacetate	515-84-4	70
Ethylamine	75-04-7	90
Ethylcyclohexane	-----	18700
Ethylene Dichloride	107-06-2	160
Ethylene Glycol Monobutyl Ether	111-76-2	240
Ethylene Glycol Monoethyl Ether	110-80-5	180
Ethyl Lactate	97-64-3	1930

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Ethylhexyl Nitrate	27247-96-7	1050
Fatty Acids	-----	1000
Fluorene	86-73-7	10
Fluorobenzene	462-06-6	390
Formamide	75-12-7	180
Formic Acid	64-18-6	90
Freon 113	76-13-1	38000
Fuel Oil	77650-28-3	1000
Fuel Oil No. 2	77650-28-3	1000
Furfural	98-01-1	80
Furfuryl Alcohol	98-00-0	400
Gasoline Blend Stock	8006-61-9	3500
Glutaraldehyde	111-30-8	2
Glyoxal	107-22-2	40
Halothane	151-67-7	160
Heating Oil #2	77650-28-3	1000
Heptane	142-82-5	3500
Hexachlorocyclopentadiene	77-47-4	1
Hexafluoroacetone	648-16-2	7
Hexamethyleneimine	111-49-9	100
Hexone	108-10-1	2050
Hexylene Glycol	107-41-5	1200
Hydrogen Bromide	10035-10-6	100
Hydrogen Iodide	10034-85-2	150
Hydroxylamine	7803-49-8	20
Isobutyl Alcohol	78-83-1	1520
Isobutyl Heptyl Ketone	123-17-1	3750
Isobutyl Isobutyrate	97-85-8	3000
Isobutyl Methacrylate	97-86-9	1900

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Isobutylamine	78-81-9	150
Isocyanobenzotrifluoride	71121-36-3	0.4
Isoheptyl Alcohol	-----	2700
Isononyl Alcohol	-----	2700
Isooctyl Alcohol	26952-21-6	2700
Isopentane	78-78-4	3500
Isophorone	78-59-1	230
Isopropanolamine	78-96-6	200
Isopropylamine	75-31-0	120
Ketene	463-51-4	10
Lactic Acid	50-21-5	50
Lactol Spirits	64742-89-8	3500
Latex	-----	100
Liquid Plastic	-----	50
Liquified Petroleum Gas	68746-85-7	18000
Maleic Acid	110-16-7	14
Maleic Anhydride	108-31-6	10
Methacrolein	78-85-3	4
Methacrylic Acid	79-41-4	700
Methanesulfonic Acid	75-75-2	100
Methyl Acetate	79-20-9	6000
Methyl Acetoacetate	105-45-3	3000
Methyl Alcohol	67-56-1	2620
Methyl Aniline	100-61-8	20
Methyl Benzoate	93-58-3	160
Methyl Cellosolve	109-86-4	160
Methyl Chloride	74-87-3	1030
Methyl Cyclohexane	108-87-2	16100
Methyl Cyclopentane	96-37-7	2600

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Methyl Diethanolamine	105-59-9	500
Methyl Ethanolamine	109-83-1	140
Methyl Formamide	123-39-7	110
Methyl Formate	107-31-3	2500
Methyl Glutaronitrile	4553-62-2	80
Methyl Heptane	540-84-1	3500
Methyl Isobutyl Ketone	108-10-1	2050
Methyl Isobutyrate	547-63-7	100
Methyl Isopropyl Ketone	563-80-4	7050
Methyl Morpholine	109-02-4	350
Methyl Propionate	554-12-1	370
Methyl Propyl Ketone	107-87-9	5300
Methyl Vinyl Ketone	78-79-4	6
Methylal	109-87-5	31000
Methylene Chloride	75-09-2	260
Mineral Spirits	8032-32-4	3500
Naphthenic Acid	1338-24-5	1000
Neodol	-----	2700
Neohexane	75-83-2	3500
Nitrobenzene	98-95-3	24
Nitroethane	79-24-3	3100
Nitromethane	75-52-5	500
Nonane	111-84-2	10500
Nonyl Phenol	25154-52-3	400
O Diethyl Benzene	25340-17-4	2500
Octane	111-65-9	3500
Oleic Acid	112-80-1	100
P Diethyl Benzene	25340-17-4	2500
Paraldehyde	123-63-7	440

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Paraquat	4685-14-7	1
Pentachloroethane	76-01-7	400
Pentane	109-66-0	3500
Phenetole	103-73-1	130
Phenyl Hydrazine	100-63-0	4
Phenyl Isocyanate	103-71-9	5
Phosphoric Acid	7664-38-2	10
Potassium Hydroxide	1310-58-3	20
Propane	74-98-6	18000
Propargyl Alcohol	107-19-7	20
Propionic Anhydride	123-62-6	250
Propiophenone	93-55-0	190
Propyl Formate	110-74-7	6500
Propyl Nitrate	627-13-4	1100
Propyl Propionate	106-36-5	4750
Propyne	74-99-7	16400
Pyrrole	109-97-7	20
Quinoline	91-22-5	5
Rubber Solvent	8030-30-6	3500
Silicon Tetrachloride	10026-04-7	20
Sodium Aluminate	1302-42-7	20
Sodium Hydrosulfide	7775-14-6	140
Styrene Oxide	96-09-3	310
Succinic Anhydride	108-30-5	25
Succinonitrile	110-61-2	200
Sulfolane	126-33-0	20
Sulfur	7704-34-9	50
Sulfuric Acid	7664-93-9	TCEQ Reg II
Sulfuryl Chloride	7791-25-5	40

LIST OF APPROVED CHEMICALS

Attachment I

Permit Number 2480A

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Substance	CAS Number	Short-Term ESL µg/m3
Tall Oil	8002-26-4	100
Tallow	-----	100
Tetrachloroethylene	127-18-4	340
Tetraethylene Glycol	112-60-7	100
Tetraethylene Pentamine	112-57-2	400
Tetrahydrofuran	109-99-9	5900
Tetrahydronaphthalene	119-64-2	3000
Texanol	25265-77-4	840
Thionyl Chloride	7719-09-7	50
Toluene	108-88-3	1880
Trichloroacetyl Chloride	76-02-8	10
Trichloroethylene	79-01-6	1350
Trichloronitromethane	76-06-2	7
Triethanolamine	102-71-6	50
Triethyl Phosphate	78-40-0	500
Triethylamine	121-44-8	40
Tripropylamine	102-69-2	16
Turpentine	8006-64-2	1120
Varsol	-----	3500
Vinyl Bromide	593-60-2	220
Vinyl Toluene	25013-15-4	2420
Zinc Bromide	7699-45-8	10

Dated: XXXXXXXX

ATTACHMENT II
List of Products Currently Authorized by Permit by Rule
Permit Number 2480A

Product Name	Chemical Composition
Linpar 1416V	Alkane, C14-16
Durasyn 156	C12-14 Alpha Olefin Oligomer
Durasyn 128	Alpha Olefin Oligomer
Durasyn 127	Alpha Olefin Oligomer
Durasyn 126	Alpha Olefin Oligomer
Durasyn 126B	Alpha Olefin Proprietary Oligomer
Durasyn 125	Alpha Olefin Oligomer
Durasyn 164	1-Decene Homopolymer
Durasyn 147	1-Dodecene Homopolymer
Durasyn 145	Polyalphaolefins
Alfol 610 ADE Alcohol	Mix 1-Decanol, 1-Octanol and 1-Hexanol
Alfol 10 Alcohol	1-Decene
Alfol 810 DF	Mix 1-Octanol, 1-Decanol
Alfol 14	C14 Alpha Alcohol
Alfonic 1216 CO17	Ethoxylated Alcohol
BioDiesel Finished Product	Methyl Ester
Alpha Olefin C1214	Mix 1-Dodecene, 1-Tetradecene, 1-Decene, 1-Hexadecene
Alcohol 1216	Mix Lauryl-Cetyl Alcohol
DHR 180	Hydrotreated Distillates
DHR 200	Hydrotreated Distillates
Marlipol 013	Isotridecanol
Vegitrol 1214	Lauryl-myristyl Alcohol

Dated March 30, 2009

[illegible][illegible][illegible]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 2480A

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
B-1	Boiler 1	VOC	0.07	***
		NO _x	1.23	5.37
		SO ₂	0.01	0.03
		PM ₁₀	0.09	0.41
		CO	1.03	4.51
B-2	Boiler 2	VOC	0.07	***
		NO _x	1.23	5.37
		SO ₂	0.01	0.03
		PM ₁₀	0.09	0.41
		CO	1.03	4.51
FU-100TKS	Process Fugitives 100 Series Tanks (4)	VOC	1.40	***
FU-200TKS	Process Fugitives 200 Series Tanks (4)	VOC	0.62	***
L-1	Railcar/Tank Truck Load Station 1	VOC	103.03	***
L-2	Railcar/Tank Truck Load Station 2	VOC	103.03	***
L-3	Railcar/Tank Truck Load Station 3	VOC	103.03	***
L-4	Railcar/Tank Truck Load Station 4	VOC	103.03	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
L-5	Railcar/Tank Truck Load Station 5	VOC	103.03	***
L-6	Railcar/Tank Truck Load Station 6	VOC	103.03	***
L-7	Railcar/Tank Truck Load Station 7	VOC	103.03	***
L-8	Railcar/Tank Truck Load Station 8	VOC	103.03	***
L-9	Tank Truck Loading Station 9	VOC	103.03	***
L-10	Railcar/Tank Truck Load Station 10	VOC	103.03	***
L-11	Tank Truck Loading Station 11	VOC	103.03	***
L-12	Railcar/Tank Truck Load Station 12	VOC	103.03	***
L-13	Railcar/Tank Truck Load Station 13	VOC	103.03	***
L-14	Railcar/Tank Truck Load Station 14	VOC	103.03	***
L-15	Railcar/Tank Truck Load Station 15	VOC	103.03	***
L-16	Drum Loading Station 16	VOC	17.62	***
L-17	Drum Loading Station 17	VOC	17.62	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
SD-1	Ship Dock Loading	VOC	58.00	***
		VOC (5)	1.0	4.36
TO-1	Enclosed Flare (6)	VOC	25.40	***
		NO _x	2.37	0.52
		CO	20.34	4.44
TO-2	Marine Enclosed Flare (6)	VOC	25.40	***
		NO _x	2.37	0.52
		CO	20.34	4.44
TO-3	North Enclosed Flare (6)	VOC	25.40	***
		NO _x	2.37	0.52
		CO	20.34	4.44
CAS	Carbon Adsorption System (7)	VOC	25.40	***
T-021	Storage Tank 21	VOC	21.44	***
T-022	Storage Tank 22	VOC	21.44	***
T-023	Storage Tank 23	VOC	21.44	***
T-024	Storage Tank 24	VOC	21.44	***
T-025	Storage Tank 25	VOC	21.44	***
T-026	Storage Tank 26	VOC	21.44	***
T-101	Storage Tank 101	VOC	21.44	***
T-102	Storage Tank 102	VOC	21.44	***
T-103	Storage Tank 103	VOC	21.44	***
T-104	Storage Tank 104	VOC	21.44	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
T-105	Storage Tank 105	VOC	21.44	***
T-106	Storage Tank 106	VOC	21.44	***
T-115	Storage Tank 115	VOC	73.50	***
T-116	Storage Tank 116	VOC	73.50	***
T-117	Storage Tank 117	VOC	73.50	***
T-118	Storage Tank 118	VOC	73.50	***
T-119	Storage Tank 119	VOC	73.50	***
T-120	Storage Tank 120	VOC	73.50	***
T-121	Storage Tank 121	VOC	91.88	***
T-122	Storage Tank 122	VOC	91.88	***
T-123	Storage Tank 123	VOC	91.88	***
T-124	Storage Tank 124	VOC	91.88	***
T-125	Storage Tank 125	VOC	91.88	***
T-126	Storage Tank 126	VOC	91.88	***
T-127	Storage Tank 127	VOC	91.88	***
T-128	Storage Tank 128	VOC	91.88	***
T-129	Storage Tank 129	VOC	91.88	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
T-130	Storage Tank 130	VOC	91.88	***
T-131	Storage Tank 131	VOC	91.88	***
T-132	Storage Tank 132	VOC	91.88	***
T-133	Storage Tank 133	VOC	91.88	***
T-134	Storage Tank 134	VOC	91.88	***
T-135	Storage Tank 135	VOC	91.88	***
T-136	Storage Tank 136	VOC	91.88	***
T-137	Storage Tank 137	VOC	91.88	***
T-138	Storage Tank 138	VOC	91.88	***
T-139	Storage Tank 139	VOC	91.88	***
T-140	Storage Tank 140	VOC	91.88	***
T-141	Storage Tank 141	VOC	91.88	***
T-142	Storage Tank 142	VOC	91.88	***
T-143	Storage Tank 143	VOC	91.88	***
T-144	Storage Tank 144	VOC	91.88	***
T-145	Storage Tank 145	VOC	91.88	***
T-146	Storage Tank 146	VOC	91.88	***
T-147	Storage Tank 147	VOC	91.88	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	<u>Emission Rates *</u>	
			lb/hr	TPY**
T-148	Storage Tank 148	VOC	91.88	***
T-149	Storage Tank 149	VOC	91.88	***
T-150	Storage Tank 150	VOC	91.88	***
T-151	Storage Tank 151	VOC	91.88	***
T-152	Storage Tank 152	VOC	91.88	***
T-153	Storage Tank 153	VOC	91.88	***
T-154	Storage Tank 154	VOC	91.88	***
T-155	Storage Tank 155	VOC	91.88	***
T-197	Storage Tank 197	VOC	183.75	***
T-198	Storage Tank 198	VOC	104.13	***
T-199	Storage Tank 199	VOC	104.13	***
T-200	Storage Tank 200	VOC	104.13	***
T-201	Storage Tank 201	VOC	91.88	***
T-202	Storage Tank 202	VOC	91.88	***
T-204	Storage Tank 204	VOC	91.88	***
T-205	Storage Tank 205	VOC	91.88	***
T-206	Storage Tank 206	VOC	91.88	***

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
T-207	Storage Tank 207	VOC	91.88	***
T-208	Storage Tank 208	VOC	104.13	***
T-209	Storage Tank 209	VOC	104.13	***
T-210	Storage Tank 210	VOC	183.75	***
T-211	Storage Tank 211	VOC	183.75	***
T-212	Storage Tank 212	VOC	183.75	***
T-213	Storage Tank 213	VOC	183.75	***
T-214	Storage Tank 214	VOC	183.75	***
T-215	Storage Tank 215	VOC	183.75	***
T-216	Storage Tank 216	VOC	183.75	***
T-219	Storage Tank 219	VOC	183.75	***
T-220	Storage Tank 220	VOC	183.75	***
T-221	Storage Tank 221	VOC	91.88	***
T-222	Storage Tank 222	VOC	91.88	***
T-223	Storage Tank 223	VOC	91.88	***
T-224	Storage Tank 224	VOC	91.88	***
T-225	Storage Tank 225	VOC	91.88	***
T-226	Storage Tank 226	VOC	91.88	***

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EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
T-227	Storage Tank 227	VOC	91.88	***
T-228	Storage Tank 228	VOC	91.88	***
T-229	Storage Tank 229	VOC	91.88	***
T-230	Storage Tank 230	VOC	91.88	***
T-231	Storage Tank 231	VOC	91.88	***
T-232	Storage Tank 232	VOC	91.88	***
T-233	Storage Tank 233	VOC	91.88	***
T-234	Storage Tank 234	VOC	91.88	***
T-235	Storage Tank 235	VOC	91.88	***
T-236	Storage Tank 236	VOC	91.88	***
T-237	Storage Tank 237	VOC	91.88	***
T-238	Storage Tank 238	VOC	91.88	***
All EPNs	All Sources	VOC		107.7

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
2011 Expansion Project				
T-203	Storage Tank 203	VOC	0.67	18.50
T-239	Storage Tank 239	VOC	0.91	18.50
T-240	Storage Tank 240	VOC	1.49	18.50
T-241	Storage Tank 241	VOC	1.49	18.50
T-242	Storage Tank 242	VOC	1.49	18.50
T-243	Storage Tank 243	VOC	1.49	18.50
T-244	Storage Tank 244	VOC	0.67	18.50
T-245	Storage Tank 245	VOC	0.67	18.50
T-246	Storage Tank 246	VOC	1.61	18.50
T-247	Storage Tank 247	VOC	1.62	18.50
T-248	Storage Tank 248	VOC	1.62	18.50
L-18	Railcar/Tank Truck Load Station 18	VOC	103.03	2.59
T-03	Flare TO-3	VOC	24.79	0.84
		NO _x	3.49	0.15
		CO	6.97	0.30
		SO ₂	0.01	0.01
Routine Annual Emissions Cap for 2011 Expansion Project (9)		VOC		21.93

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
FUG	Fugitives (2011 Expansion Project)	VOC	0.32	1.39
UNC-MSS	Uncontrolled MSS Emissions	VOC	346.48	1.62
PTO	Portable Thermal Oxidizer	VOC	1.16	0.04
		NO _x	3.35	0.22
		CO	1.94	0.07
		PM/PM ₁₀ /PM _{2.5}	0.18	0.02
B-3	Boiler 3 (8)	VOC	0.11	0.48
		NO _x	2.00	8.76
		SO ₂	0.01	0.05
		PM ₁₀	0.15	0.67
		CO	1.68	7.36

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 NO_x - total oxides of nitrogen
 SO₂ - sulfur dioxide
 PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
 CO - carbon monoxide
 HCl - hydrogen chloride
- (4) Fugitive emissions are an estimate only and should not be considered as a maximum allowable emission rate.
- (5) Emissions authorized by Permit by Rule Registration Number 76067
- (6) Flares shall be used for abatement of nonhalogenated hydrocarbons.
- (7) CAS can be used for abatement of both nonhalogenated and/or halogenated hydrocarbons.
- (8) Emissions authorized by Permit by Rule 106.183.
- (9) Subcap for 2011 Expansion project. The emissions are considered part of the All EPNs - All Sources Cap.

* Emission rates are based on and the facilities are limited by the following maximum operating schedule:

24 Hrs/day 7 Days/week 52 Weeks/year

** Compliance with annual emission limits is based on a rolling 12-month period.

*** Annual VOC emissions facility-wide shall not exceed 107.7 tons/year.

Dated November 21, 2011

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